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Remarks

This is in response to the non-final Office Action mailed January 24, 2006. The Applicant expresses sincere appreciation to the Examiner for the diligent efforts made during the present extended prosecution. It is believed that with this response, the present application is in proper condition for reconsideration and allowance.

The Applicant has hereinabove presented a minor amendment to the title of the specification, to better conform to the claimed subject matter. Support for this amendment includes in the specification at page 2, lines 21-23; page 3, lines 5-6; page 10, lines 16-18; page 11, line 29 to page 12, line 3; and page 12, lines 14-22.

New claims 21-25 have been added. New claim 21 is an independent apparatus claim that generally features a "*method for reducing processing burden on a processing device.*" Support for this language includes that set forth above.

Claim 21 further generally recites steps of "*transmitting first data via a bus coupled to the processing device, updating at least one register or parameter via the bus, and transmitting second data via the bus in response to the updating step.*" Support includes the previously presented language of claims 1 and 16 as well as in the specification at page 2, lines 21-29; page 3, lines 1-10; and FIGS. 1 and 6.

Claim 22 depends from claim 21 and generally features the recited bus as "*characterized as a selected one of a serial bus or a parallel bus.*" Support includes that set forth above as well as the previously presented language of claims 17 and 18.

Claim 23 depends from claim 21 and generally features the recited first and second data as "*as user data transferred between a host device and a storage medium.*" Support includes in the specification at page 9, lines 20-21.

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Claim 24 depends from claim 23 and generally features the “*user data are transmitted via the bus between a read/write channel and a controller.*” Support includes in the specification at page 3, lines 11-18 and the previously presented language of claim 1.

Claim 25 depends from claim 21 and generally recites “*wherein the first data are transmitted at a first data rate and the second data are transmitted at a second rate different than the first rate.*” Support includes the previously presented language of claim 10 as well as in the specification at page 5, lines 16-17.

These amendments are believed to be proper, do not introduce new matter, are not provided for reasons substantially related to patentability, and serve to place the application in proper condition for reconsideration and allowance.

Rejection of Claims Under 35 U.S.C. §101

The Office Action rejected claims 16-20 under 35 U.S.C. §101 as being directed to non-statutory subject matter. This rejection is respectfully traversed. It is noted that these claims have been pending in the application since October 8, 2003, and are only now being rejected under §101 after four intervening Office Actions that found no deficiencies with the claims under this statute.

In support of the rejection under §101, the Examiner stated that claims 16-20 serve to “*detail manipulation of information in a register or parameter and providing information over a bus, which lacks practical application because it can be easily construed as an abstract idea as well as having no concrete or useful application/result.*” Office Action, page 2, lines 15-19 (emphasis added).

This rejection is erroneous on two grounds. First, the Applicant respectfully submits that the skilled artisan would immediately view "*providing data via a bus, updating at least one register or parameter via the bus, and providing data via the bus responsive to the updating*" as featured by claim 16 as a sequence of physical steps, not mere abstract concepts. See *In re Allapat*, 31 USPQ2d 1545 (Fed. Cir. 1994) (*en banc*).

Moreover, the skilled artisan would readily view these physical steps as achieving the requisite utility of §101 (so-called "practical application") such as by, for example, reducing processing burden of a processor as discussed in the accompanying specification. See page 11, line 29 to page 12, line 3.

Second, the Applicant respectfully submits that the Examiner has failed to meet the burden of establishing a *prima facie* case of non-statutory subject matter *vis a vis* §101. As stated by MPEP 2106, "*Office personnel have the burden to establish a prima facie case that the claimed invention as a whole is directed to solely an abstract idea or to manipulation of abstract ideas or does not produce a useful result. Only when the claim is devoid of any limitation to a practical application in the technological arts should it be rejected under 35 U.S.C. 101.*" See also *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 47 USPQ2d 1596 (Fed. Cir. 1998), *In re Warmerdam*, 31 USPQ2d 1754 (Fed. Cir. 1994).

In support of the present rejection under §101, the Examiner has asserted that the claims "can be easily construed as" an abstract idea or as having no concrete or useful application. This is insufficient to meet the above burden, since the Examiner's statement tacitly admits that the claims could be construed otherwise.

The Applicant submits that claims 16-20, as well as the remaining claims in the application, fully meet the requirements of §101. Reconsideration and withdrawal of the rejection of claims 16-20 under §101 are therefore respectfully requested.

Rejection of Claims Under 35 U.S.C. §102(b)

Claims 1-3, 5, 16, 18 and 19 were rejected as being anticipated by U.S. Patent No. 5,276,564 to Hessing et al. ("Hessing '564"). This rejection is respectfully traversed.

Hessing '564 at least fails to disclose steps of "*(a) retrieving a first portion of the recorded data via the bus,*" "*(b) updating some of the registers via the bus,*" and "*(c) retrieving a second portion of the recorded data via the bus,*" as featured by claim 1.

Hessing '564 discloses to transfer recorded data from read channel 12 to data path controller 26 via a serial data bus. This bus is disclosed as being formed by decoded serial read data path 36 and read clock path 38. Col. 3, lines 25-27 and FIG. 1.

Hessing '564 further discloses to use a separate system bus 50 to pass data from ROM 23 to timing generator 20 to update registers 74, 76. Col. 5, lines 24-26 and FIG. 1.

The Examiner has supported the rejection by stating that the claim term "bus" in claim 1 can be construed as "*all signal lines connecting items 12, 20 and 26, note the bus comprises all of the connecting signal lines.*" Office Action, page 3, lines 18-20. This construction is erroneous and constitutes reversible error.

It is well settled that a claim term is to be given its ordinary and customary meaning as understood by one skilled in the art unless the Applicant has provided a *clear indication* that the term is to be given a non-standard definition. See *Boss Control, Inc. v.*

Bombardier Inc., 410 F.3d 1372(Fed. Cir. 2005); *In re Morris*, 44 USPQ2d 1023 (Fed. Cir. 1997); MPEP 2111.

The Applicant has used the term “bus” in the specification in accordance with its ordinary and customary meaning, and has provided no indication that the term is to be given a non-standard definition. See e.g., step 14 in FIG. 1; bus 360 in FIG. 3; step 23 in FIG. 5; step 33 in FIG. 6. The Examiner is therefore obliged *as a matter of law* to render a reasonable construction of the claim term “bus” in accordance with the term’s ordinary and customary meaning as understood by a skilled artisan. See *Morris, Supra*; *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005)(*en banc*).

In the present case, the Examiner has failed to render a reasonable construction for the term “bus,” and has instead construed this to cover each and every signal path shown in FIG. 1 connecting items 12, 20 and 26. For clarity, the Applicant presumes the Examiner to mean by this statement that the “bus” is any signal path in FIG. 1 of Hessing ‘564 that connects to any of the items 12, 20, 26. This is because FIG. 1 of Hessing ‘564 in fact shows no signal paths that interconnect all three of these devices, which would be in accordance with the ordinary and customary meaning of a “bus.”

Accordingly, the Examiner has identified the following independent signal paths in FIG. 1 of Hessing ‘564 as collectively constituting the recited “bus”: readback signal path 11, servo serial data path 18, control line 32, multi-path control bus 34, decoded serial read data path 36, read clock path 38, sector output line 42, index output line 44, system data bus 50, unnumbered “position error signal” path from channel 12 to ADC 16, unnumbered “status and interrupt multi-path” bus from timing generator 20 to processor

22, unnumbered and unlabeled multi-path bus between controller 26 and buffer 28, and unnumbered "host bus" from controller 26 to a host device.

The Applicant respectfully submits that no one with skill in the art would construe the claim term "bus" in this manner. Indeed, Hessing '564 clearly distinguishes between the system bus 50 and the host bus as constituting separate busses, and further distinguishes between the system bus 50 and the data paths 36, 38. No one with skill would thus consider these various separate paths as making up the same "bus."

Hessing '564 clearly discloses to pass data along paths 36, 38 and to update registers 74, 76 via system bus 50. Hessing '564 therefore fails to disclose the claimed subject matter of claim 1. Reconsideration and withdrawal of the rejection of claim 1, as well as for the claims depending therefrom, are requested on this basis.

With regard to independent claim 16, Hessing '564 is similarly deficient with regard to disclosing "*(a) providing data via a bus; (b) updating at least one register or parameter via the bus; and (c) providing data via the bus responsive to the updating.*" Reconsideration and withdrawal of the rejection of claim 16, and for the claims depending therefrom, are also respectfully requested on this basis.

Rejection of Claims Under 35 U.S.C. §103(a)

Claim 4 was rejected as being obvious over Hessing '564 in view of U.S. Patent No. 6,381,085 to Du ("Du '085"). Claim 17 was rejected as being obvious over Hessing '564 in view of U.S. Patent No. 3,883,853 to O'Brien et al. ("O'Brien '853"). Claim 20 was rejected as being obvious over Hessing '564 in view of U.S. Patent No. 5,438,665 to Taniai et al. ("Taniai '665").

These rejections are respectfully traversed on the basis that these claims depend from a patentable base claim believed to be patentable for the foregoing reasons. Moreover, these rejections are traversed on the basis that none of these references, alone or in combination, serve to make up for the deficiencies of Hessing '564 with regard to teaching or suggesting the claimed subject matter. Reconsideration and withdrawal of the rejections of these claims are requested on these bases.

Allowable Subject Matter

The Applicant gratefully acknowledges the allowance of claims 6-15.

Newly Added Claims

Pursuant to 37 CFR 1.111, newly added claims 21-25 are also believed to be patentable over the art of record. New claim 21 is an independent claim generally directed to a "*method for reducing processing burden on a processing device, comprising steps of transmitting first data via a bus coupled to the processing device, updating at least one register or parameter via the bus, and transmitting second data via the bus in response to the updating step.*"

It is believed that the practical application of this claim is clearly set forth in the preamble, thereby meeting the requirements of §101. Moreover, these steps are not disclosed, taught or suggested by Hessing '564 or the other art of record as discussed above, so that this claim is believed to be patentable over the art of record pursuant to §§102, 103 for the same reasons set forth above for claims 1 and 16.

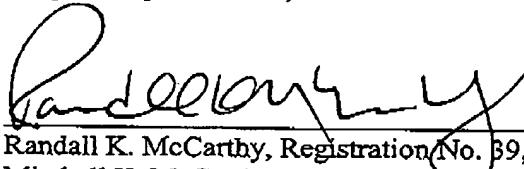
Claims 22-25 are dependent claims from claim 21, and are therefore believed to be patentable as depending from a patentable base claim.

Conclusion

This is intended to be a complete response to the non-final Office Action of January 24, 2006. Reconsideration and allowance of all of the claims are respectfully requested. Should any questions arise concerning this application, the Examiner is encouraged to contact the below signed attorney.

Respectfully submitted,

By:


Randall K. McCarthy, Registration No. 39,297
Mitchell K. McCarthy, Registration No. 38,794
Fellers, Snider, Blankenship, Bailey & Tippens
100 North Broadway, Suite 1700
Oklahoma City, OK 73102-8820
Telephone: (405) 232-0621
Fax: (405) 232-9659

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